Integrating Strategy-Making through Interactive Controls: Seizing Opportunities and Managing Threats

Johanna Sax
Copenhagen Business School
Department of Strategic Management and Globalization
Kilen, Kilevej 14A
2000 Frederiksberg
Denmark
js.smg@cbs.dk

Torben Juul Andersen
Copenhagen Business School
Department of International Economics and Management
Porcelænshaven 24A
2000 Frederiksberg
Denmark
tja.int@cbs.dk

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Abstract

Strategic responses to complex and frequent environmental changes must balance the tension between innovative opportunistic search and optimization of operating processes. The ability to survive and thrive depends on an ability to facilitate dispersed exploratory initiatives, test their commercial viability, and exploit the associated business opportunities. However, dispersion of authority requires coordination as well as empowerment calls for extended controls. Hence, there is a tension between the aim of avoiding diversion of corporate resources through tight control of plans and facilitation of decentralized autonomous initiatives searching for opportunities. This prescribes a strategy process that gives direction and forms structure while it at the same time enables innovative behaviors and entrepreneurial initiatives. To this end, the paper outlines an integrative model that combines centrally planned (induced) and decentralized (autonomous) strategy-making with interactive control processes. The strategy and management accounting literatures are synthesized to develop the theoretical underpinning for the model and its proposed outcome effects. It is argued that interaction control of central and dispersed strategy-making creates a dynamic system that drives organizational adaptation. The outmoded strategic control concept is revisited and updated for contemporary responsiveness needs under increasingly turbulent conditions. Finally, the paper lays out a method for an empirical survey-based study that can test the propositions from large-scale corporate sampling.

Introduction

Superior risk-return outcomes arguably depend on effective strategy-making processes orchestrated within a structural setup that enables the organizational adaptation required to retain competitive advantage. This reasoning goes straight to the heart of strategy as the ability to create sustainable competitive advantage (Porter, 1985; Barney, 1991). It calls for planned coordination to gain economies while making room for proactive behaviors to uncover new potential as expressed in the concurrent requirements for exploitation and exploration (March, 1991). The need for a balanced approach is accentuated by the increasingly turbulent and unpredictable environment (e.g., Bettis & Hitt, 1995; Teece, Pisano, & Shuen, 1997). The strategic planning and control process provide needed operational coordination (Ansoff, 1988; Ansoff & MacDonnell, 1990; Vancil & Lorange, 1976) but the ability to respond to emerging opportunities is equally important (Mintzberg & Waters, 1985; Mintzberg, 1978).

Both induced and autonomous strategy-making matter and hence the real challenge lies in the ability to integrate the two process modes effectively (Burgelman & Grove, 1996, 2007; Hart, 1992). In the conventional strategy view, the strategic control process is used to update action plans based on periodic performance feedback. However, this approach reflects a command-and-control perspective that may stale proactive strategic thinking (Simons, 1994, 1995). In contrast, the application of interactive controls may provide the means to effectively integrate the central forward-looking and the decentralized trial-and-error learning from the two strategy-making modes and thereby facilitate organizational adaptation (Simons, 1994, 1991, 2003). Little research has been devoted to analyze this more complex integrative strategy-making process and the potential dual outcomes of optimal operating features and higher responsiveness to challenging changes in the environment.

Hence, this paper considers strategy-making processes that incorporate features of central planning, strategic control, decentralized decision-making, combined with communication and information systems that link decision makers across hierarchical levels and functional areas. Thereby, we extend previous studies by analyzing the risk and performance dynamic of more complex strategy making processes that combine centrally induced and decentralized autonomous strategy modes. In doing this, we consider how favorable risk-return outcomes can derive from decentralized exploration and central exploitation through interactive strategic control mechanisms.

In the subsequent sections, we discuss central elements of the literatures on strategic management and management accounting to outline the more complex integrative strategy-making process and its relationship to different management control systems.

Background

Contemporary environments are often hypercompetitive characterized by frequent technological changes, shorter product cycles, and ongoing innovation that challenge existing competitive advantages (Ilinitch, Aveni, & Lewin, 1996; Thomas, 1996). Hypercompetition is often associated with fundamental uncertainty (Volberda, 1996) and 'unknowability' where many environmental hazards are difficult to forecast and foresee (Bettis & Hitt, 1995). In this kind of unpredictable setting, strategic response capabilities (Bettis & Hitt, 1995), adaptive capabilities (Volberda, 1996), and dynamic capabilities (Teece et al., 1997) become important drivers of firm performance. Hence, it is suggested that an organization's mastery and adoption of diverse strategy making modes, e.g., command, generative, learning, etc., can be an advantage under turbulent conditions (Banbury & Hart, 1994; Hart, 1992).

The conventional strategic management paradigm is conceived within the tradition of rational analyses where organizational actions are guided by strategic plans with goals and

objectives derived from a systematic assessment of environmental conditions (Ansoff, 1988; Hofer & Schendel, 1980). Critics of strategic planning argue that too formalized plans stifle the organization's ability to react to unexpected environmental developments (Hamel, 1996; Mintzberg, 1994). Other recent studies suggest that strategic planning has evolved from a prescriptive process that attempts to predict future events to an integral part of the management processes that provide guidance and flexibility (e.g. Andersen, 2004; Grant, 2003).

The dynamic changes and increasing complexity of business conditions require that strategies be considered through comprehensive analyses of the environmental context (Hofer & Schendel, 1980). And various studies have indeed found positive performance relationships of strategic management conceived as a rational analytical planning process particularly in dynamic environments (Andersen, 2000; Brews & Hunt, 1999; C. C. Miller & Cardinal, 1994). And a number of empirical studies have found organizations that are able to combine central planning with strategic initiatives generated by managers at lower level business entities outperform their peers (Andersen, 2004a; Baum & Wally, 2003).

Various qualitative studies have demonstrated the significance of strategic emergence in corporate strategy (Bower, 1986; Burgelman, 1983; Burgelman & Groove, 1996). These studies depict decentralized initiatives developed within the organization as the source of opportunities that have potential strategic implications (Mintzberg, 1994). The so-called Bower-Burgelman process model depicts strategy making as managerial actions pursued simultaneously at three organizational levels: top managers, middle managers, and functional specialists (Burgelman & Groove, 1996; Bower & Gilbert, 2005). In this set-up, middle management supervises functional managers as they engage in new initiatives and, if successful, promote these opportunities to top management with a potential that they eventually become part of the official corporate strategy. Top management influences strategy by formulating corporate policies and setting up the organizational structure. The middle managers act as liaisons between top management and lower

level managers and specialists by overseeing resource committing decisions in the functional entities and creating corporate awareness about new strategic opportunities (Bower & Noda, 1996).

Since these managers are closer to customers, suppliers, and internal operations they are arguable in a better position to take responsive initiatives as conditions change and the organization can react faster (Huber, 1990). As Kanter (1982: 96) argues: “Because middle managers have their fingers on the pulse of operations, they can also conceive, suggest and set in motion new ideas that top management may not have thought of”. Lower level initiatives can thus have interesting outcomes and may constitute paths to future corporate strategy if they turn out to be successful business propositions.

On the other hand, giving decision making authority to middle managers can expose the firm to opportunistic behaviors including destructive entrepreneurship (Foss, Foss, & Klein, 2007), foot-dragging and sabotage (Guth & MacMilliam, 1986). Further, middle managers have been criticized for “putting their own spin on” the input brought upward in the organization (Floyd & Wooldridge, 1994: 53). Sternard (2012) argues that individuals or coalitions use political tactics to influence which risk responses or strategic options are being considered and final alternatives that are selected. Consequently, to truly benefit from decentralized strategic decision-making firms should combine empowerment with formal control processes that both facilitate communication channels between hierarchical management levels and between middle managers.

In the management control literature such formal information systems are referred to as interactive control systems, which according to Simons (1994: 81) “enables top-level managers to focus on strategic uncertainties, to learn about threat and opportunities as competitive conditions change, and to respond proactively”. They are control systems that facilitate an open dialog by involving management in the decisions of the subordinates on a personal and regular basis. These

systems focus on continuous changing strategic information requiring a revision of action plans to address threats and opportunities.

Further, Simons (1995) argues that three other control systems are equally important: boundary, belief and diagnostic. It is only when these control systems are working together that a balance between creativity and control can be sustained (Chenhall, 2003; Simons, 1994; Widener, 2007). The belief and boundary systems articulate limits around risk taking and inform organizational members about strategic opportunities to explore and exploit (Roberts, 1990; Simons, 1994; Widener, 2007). The belief system represents the organization's basic values, purpose and direction that are communicated formally by the top management (Simons, 1995). The purpose is to secure goal commitment throughout the organization and to inspire employees in their search for opportunities and risk responds without prescribing the particular nature of the activities (Tuomela, 2005). The boundary system communicates the domain of acceptable activities and aims to ensure effective resource utilization. Thus, a boundary system should in turn raise an understanding of the strategic risks that must be avoided or minimized (Simons, 1994; Tuomela, 2005).

Diagnostic use of budgets constitutes a feedback system that monitors achievement of preset performance standards. The budgets provide a mean to communicate critical performance variables and monitor implementation of intended strategic aims. In that sense, budgets can provide direction towards achieving strategic goals through a focus on pre-established targets and correcting deviations from that path (Hofmann, Wald, & Gleich, 2012). In effect, the planning process incorporates central elements of belief, boundary, and diagnostic control systems (Simons, 1994). Since realized outcomes typically differ from the plans, the strategic control systems may enable learning about changing environmental conditions and the implied means-ends relationships although this can be exceedingly difficult (Goold & Quinn, 1990; Quinn, 1996). While diagnostic control represents automatic processes and control-at-a-distance, interactive

control makes senior managers personally involved in the decisions of subordinates (Marginson, 2002; Simons, 1994).

Senior managers encourage debate of budget targets in face-to-face meetings and allow subordinates to challenge underlying assumptions and action plans (Simons, 1994). That is, the interactive use of budgets extends opportunity seeking and interactive learning throughout the organization (Henri, 2006), and new strategies may emerge from this. Accordingly, it has been argued that a more complete understanding of the complex strategy making process must embrace both intended, i.e., planned, and emergent strategy perspectives (Mintzberg & Waters, 2009; Mintzberg, 1978). It is precisely in this context an interactive use of management information systems may channel current experiential insights into the forward-looking planning considerations while also informing exploratory initiatives taken by lower-level functional managers (Simons, 1990, 1991). Centrally induced and decentralized autonomous strategies together with interactive controls supported by communication and information systems, therefore, seem to be important features of effective strategy-making processes.

Decentralization gives managers at lower level business units the authority to take actions in response to observed changes and modify activities in their entities without permission from members of the top management team. This corresponds to the common depictions of strategic emergence as initiatives arising from active managers operating within the organization where they instigate and champion new business ventures and product offerings, at times even without top management knowing about it (Mintzberg, 1994).

The solution to the increasing information processing needs in contemporary organizations has been to move decisions down in the organization closer to the location of relevant information and expertise (Child & McGrath, 2001; Volberda, 1996). And, there has indeed been a shift from hierarchical organizations to horizontal operating hybrids with cross-functional collaboration (Achrol, 1997; Galbraith, 1995). Nonetheless, there is a mounting realization that effective

organizations pursue central integrative processes where decision-making is embedded in a more rigid organizational structure (Hill, Martin, & Harris, 2000; Jelinek & Schoonhoven, 1990). So, rather than a general call for decentralization the real challenge lies in an ability to effectively combine strategic control features with experimental business responses initiated at lower-level managerial decision nodes.

In this context, the communication and information systems employed in the management control process may constitute an important interaction medium between the strategic monitoring of performance outcomes and experiential learning that takes place when the decentralized business units act in response to changing conditions. Hence, the underlying communication channels may be comprised by management information systems that keep top management informed about corporate performance and allow exchange of subunit performance among functional managers (Simons, 1990, 1994, 1995).

Integrative strategy-making in uncertain environments

Conceiving strategy as a sequence of resource committing decisions and resulting actions in different parts of the organization essentially captures autonomous initiatives taken within a decentralized decision structure (Bower & Gilbert, 2005; Bower, 1986; Mintzberg, 1978). The dispersion of decision power allows new opportunities to emerge from exploratory responsive actions taken by managers in lower-level organizational entities. To the extent resources are engaged at lower hierarchical levels, they can eventually shape the development of internal competencies and thereby influence the strategic direction the corporation effectively can partake (Bower & Gilbert, 2005; Bower & Noda, 1996).

In contrast, central planning decisions are made on the basis of general assessments of the performance across all the functional entities. Use of management information systems to monitor performance may provide some control over strategic outcomes as learning from deviation

analyses improve the cognitive understanding of business conditions and means-ends relationships. The knowledge gained from these control processes may be used to guide the forward-looking evaluations of new strategic opportunities (Ansoff, 1988; Richards, 1986; Simons, 1990, 2005) as well as the forward-looking evaluations can be adopted to assess the actions taken at lower hierarchical levels.

However, more complex hybrid organizations combine the forward-looking features of strategic planning with backward learning from the experiential insights gained from emergent initiatives taken within the organization. Here planning and control is seen as the means to gain a shared understanding of the environment and exchange experiential insights gained from dispersed responsive initiatives. This suggests that more comprehensive planning and control processes with associated management information and communication systems can improve the predictability of new opportunities and thereby reach better decision outcomes. However, adhering to a very stringent planning and strategic control process may also conform managerial thinking and limit the ability to see alternative directions.

Strategic emergence relates to decentralized managerial decision-making where strategy is shaped by experimentation with new business initiatives arising from actions taken by managers at lower hierarchical levels (Andersen, 2004a; Burgelman, 1983, 1988; Mintzberg, 1994). The dispersion of decision power allows managers at lower levels of the organization to take actions in response to performance changes they identify in their task environment so they conduct a range of experimenting initiatives within their functional subunits. The functional managers may further use communication and information systems to coordinate the experimental actions with other functional entities. Wider experimentation can improve the organization's ability to find new beneficial opportunities but decentralized actions may also lead to an uncoordinated 'goose chase' without general direction. As Simons (1994: 163) argues: "control systems must balance empowerment and control in such a way that empowerment does not lead to a control failure, and

correspondingly, control does not lead to an empowerment failure". Hence, a more complete model of the complex strategy making process should consider integrative strategic controls and central management information systems in association with decentralized experimental actions and lateral coordination through intra-organizational communication systems.

Strategic planning is itself a form of control process providing directions and setting boundaries for managerial decisions (Anthony & Govindarajan, 2006; Simons, 1994). Hence, the purpose of planning is, inter alia, to develop a framework of reference for the annual operating budget (Anthony & Govindarajan, 2006; Camillus, 1975). As Anthony & Govindarajan (2006: 332) argues: "A company without a strategic planning process considers too many strategic issues in the budgeting stage, potentially leading to information overload, inadequate considerations of strategic alternatives, or neglect of some choices altogether".

Strategic planning involves clarifying mission and values, outlining long-term strategic goals and objectives, analyzing risks and opportunities, assessing strengths and weaknesses, evaluating alternative strategies, monitoring strategic outcomes, and updating short-term actions plans (Boyd & Reuning-Elliott, 1998). In this context, the budgets are typically used to assess expected outcomes of the strategic plan for the coming accounting year as the basis for resource allocation and monitoring of business units and their managers. In general, budgets serve as a medium to quantify outcomes of the long-term strategic plan with a focus on a single year (Hofmann et al., 2012; Otley, 1999).

Budgeting, or profit planning, has been criticized for constraining the operational flexibility of autonomous managers in ways that inhibit collaborative cross-functional initiatives, innovation and creativity (Frow et al., 2010). It is argued that traditional planning and budgeting processes "force managers at all levels to commit to delivering specified outcomes, even though many of the variables underpinning those outcomes are beyond their control" (Hope & Fraser, 2003: 18). Hence, in highly dynamic and competitive environments these processes will constrain

responsiveness and may even create a “performance trap” (Ibid). However, other management control system researchers argue that control and flexibility through allocation of decision right authority are not antithetical but mutually compatible (Gul & Chia, 1994; D. E. W. Marginson, 2002; Simons, 1994).

When budgets are used to generate dialog, learning and idea generation they can be classified as interactive control systems (Burchell et al., 1980; Simons, 1994). The interactive use of budgets is defined by the intensive use by both top management and lower level managers in frequent face-to-face debates where information is shared openly across management levels and functions. Furthermore, the interaction requires the non-invasive, facilitating and inspirational involvement of top management (Simons, 1994). The interactive use of budgets can then become a pertinent vehicle for the exchange of updated information about environmental changes that facilitates organizational learning by involving managers at different hierarchical levels with both forward-looking analytical capabilities as well as backward looking experiential insights from current operational initiatives.

Hence, the process goes beyond budgeting and entails “not only participation between subordinates and superiors in the budget setting, but also an ongoing dialogue between organizational members as to why budget variance occur, how the system or behaviors can be adapted and even whether any actions should be taken in response to these variances” (Abernethy & Brownell, 1999: 191). Although Simons (1994: 122) highlighted that middle managers are “important in making interactive control processes work effectively” as they are “key nodes of the information networks that reveals senior management’s concern”, the interactive control systems do not imply managerial autonomy per se. The attention is restrained to the activities of the top managers and Simons (1994) acknowledges that interactive processes can apply to all organizational levels although this view of an interactive use is not the focus of his analysis. In

fact, “an interactive control system is, by definition, an information system that is an important and recurring agenda addressed by the highest levels of management” (Simons, 1994: 97).

The integrative strategy-making model

In the preceding section we have outlined the nature of the strategic planning and the decentralized strategy-making modes as distinct elements of an integrative strategy-making approach where forward-looking analytics and updated experiential insights from current operational activities combine. We also point out how interactive budget controls are distinct from planning and autonomy and how they can facilitate the dynamic updating of the two strategy-making modes between strategy-focused top managers and responsive middle managers that explore for new opportunities. The interactive use of budgets can provide important updated environmental information to the planning considerations as well as guide autonomous actions towards favorable adaptive responses without jeopardizing the overarching strategic aims.

Interactive budget controls can enable the ability to seize opportunities from directed responsive actions aimed to explore and develop new business ventures that apply to changing competitive requirements. Hence, interactive budget controls should lead to better exploitation of the potential for upside gains and thereby allow the organization to respond more smoothly to environmental change. Since, the interactive budget control process relies on central forward-looking analytics as well as experiential insights from autonomous initiatives, they should interact positively with strategic planning as well as decentralized strategy-making. The potential benefits of the interactive use of budgets in the integrative strategy model can be summarized in propositions supported by the logical arguments developed above:

H1.1: *The emphasis on interactive use of budgets to control strategic outcomes is positively related to the propensity for upside gains in corporate performance.*

H1.2: *The emphasis on interactive use of budgets to control strategic outcomes is negatively related to the variation in corporate performance outcomes over time.*

H2.1: *The emphasis on strategic planning enforces the positive relationship between interactive use of budgets and the propensity for upside gains in corporate performance.*

H2.2: *The emphasis on strategic planning enforces the negative relationship between interactive use of budgets and the variation in corporate performance over time.*

H3.1: *The emphasis on decentralized strategy-making enforces the positive relationship between interactive use of budgets and the propensity for upside gains in corporate performance.*

H3.2: *The emphasis on decentralized strategy-making enforces the negative relationship between interactive use of budgets and the variation in corporate performance over time.*

The hypothesized relationships are illustrated in the models shown in Figure 1 below.

--- Please insert Figure 1 about here ---

Empirical studies – proposed methodology

Data collection

The data for the study is to be collected during 2013 by means of a cross-sectional survey sent to the 500 largest Danish firms. The survey and instruments will be pre-tested on a sample not included in the main sample to test the robustness of the constructs. The 500 firms cover a broad set of industries, including manufacturing, retailing, financial services, and other professional services. To increase the validity and reliability of the answers the survey will be sent to the CFOs, heads of marketing/sales and middle managers in the marketing/sales function to retrieve multiple answers from different hierarchal layers from the firms. To avoid common method bias, the primary data will be supplemented by secondary data on the firm's financials, industry affiliation,

number of employees etc. from a national database as recommended by Podsakoff, MacKenzie & Lee (2003).

Measures

For the measurement of strategic planning and decentralized strategy making we build on existing scales from the literature. The survey questions for the different constructs are found in the Appendix. We operationalize *strategic planning* by asking CFOs to assess their organization's emphasis on formal strategic planning using a five-item scale developed by Boyd & Reuning-Elliot (1998). This scale has been used in previous studies (e.g. Andersen & Nielsen, 2009; Andersen, 2004a,b; Rudd et al., 2008) and has exhibited good quality with prior datasets. *Decentralized strategy-making* is assessed by asking middle managers questions on the degree that they are allowed to make decisions without prior approval by the top management on five different strategic activities. The scale is previously developed and validated by Andersen (2000).

We build on Simons' original definition and description of interactive control systems and develop four items to measure the *interactive use of budgets*. These indicators are supplemented by adding items previously used by Abernethy & Brownell (1999). Since the focus of the analysis of budget behavior in this study is restricted to top management's perception of budget use with questions directed to the CFO in the respective firms. The respondents are asked to indicate the extent to which they agree with stated use of budgets in their firm.

Upside potential was measured as the second-root lower partial moment where upside potential is defined in terms of the target level of return (τ) and the relative importance of returns below the target (α) (Fishburn, 1977).

$$\text{Upside potential} = \mathrm{E}\{(\max[0, \mathrm{R} - \tau])^{\propto}\} \qquad \alpha = 2$$

We can follow the assumptions in the risk literature and assume that firms adapt their target level on an annual basis and compute upside potential using ROA over a five-year period (e.g. Miller &

Reuer, 1996). Thus, the measure captures the relative over-performance of the firm relative to the closest competition during the five years.

The other dependent variable variation in corporate performance or *performance variation* can be measured as the standard deviation of ROA over a five year period.

Control variables

As past research have found that *industry context* can have significant influence on the relationship between planning and firm performance (Miller & Cardinal, 1994) the present study uses NACE codes to explicitly control for industry-related effects. The strategic planning literature has further shown that the size of the firm may influence the planning–performance relationship (e.g. Khandwalla, 1972; Lindsay & Rue, 1980). *Firm size* has also been suggested as affecting the use of management controls in MCS literature (e.g. Khandwalla, 1972). Accordingly, we can include firm size as measured by the natural logarithm of the number of employees as a control variable. In order to control for income smoothing through slack resources we include a subjective measure of *financial slack* developed by Nohria & Gulati (1996) as a control variable. Additionally, we can control for *stock-listing* in that these firms might have an advantageous access to financial resources essential for exploitation of market opportunities.

We also consider *environmental uncertainty* as a potential control variable. Empirical contingency studies in management accounting and control literature find that the level of perceived environmental uncertainty (PEU) affects the design of MCS where high PEU apply subjective control systems and predictable environments objective control systems (Waterhouse & Tiessen, 1978). With increased environmental uncertainty organizations tend to seek external information in broad-scoped and timely information systems (Chenhall & Morris, 1982; Gordon & Narayanan, 1984). In high uncertainty environments budgets become important means to give direction (Marginson & Ogden, 2005) although high PEU is associated with interactive use of budgets as opposed to diagnostic use (Hofmann et al., 2012). Finally, Weidener (2007: 764) argues

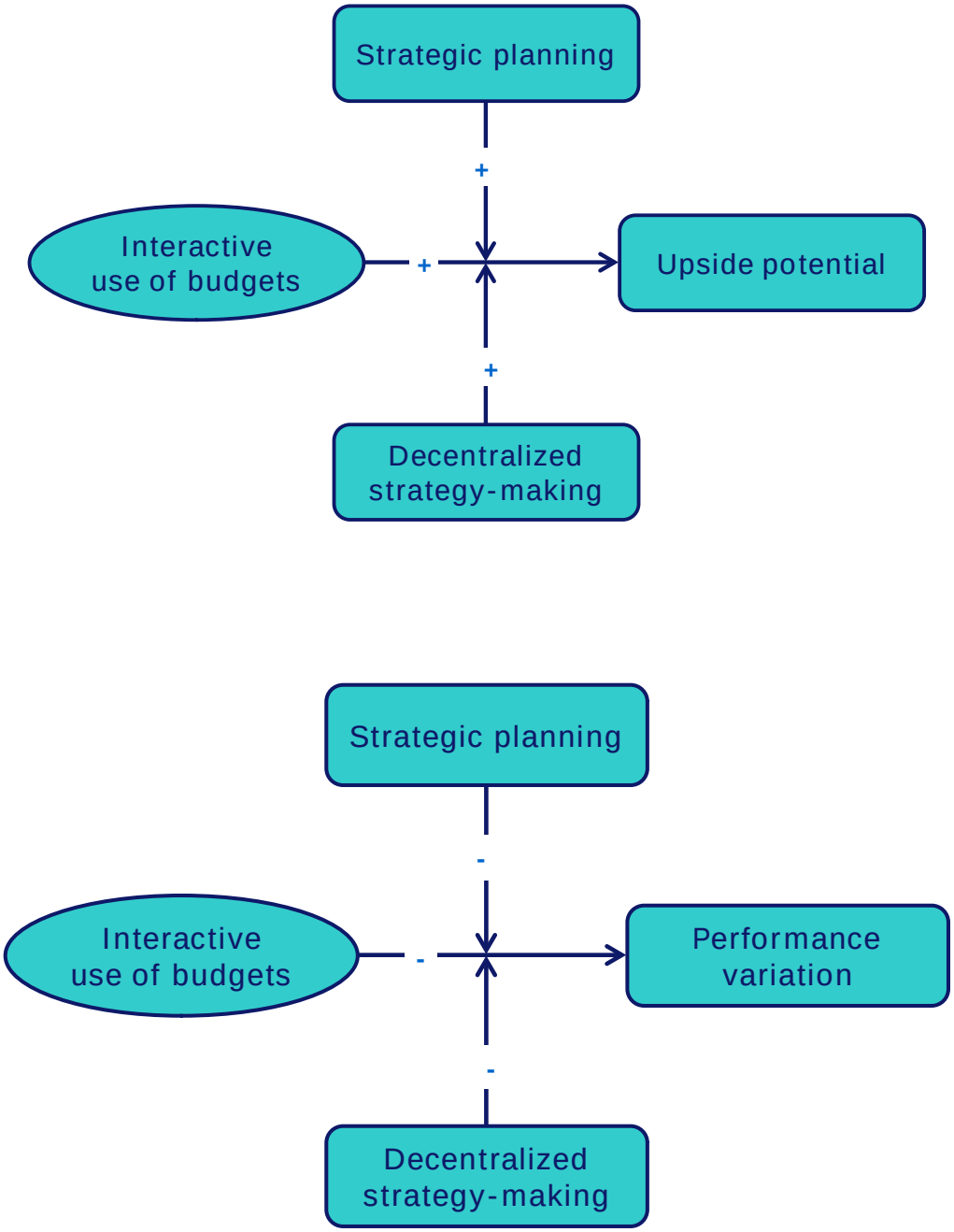
that strategic uncertainties, such as, “competitor tactics, customer switching costs and new technology often have greater variation and contain more noise” and “cause measures to be less precise”. Accordingly, the level of environmental uncertainty may affect the use of budgets as management control systems that could have mediating affects on results.

Discussion and conclusion

This work is expected to contribute to literature in several ways. It provides an updated view on the debate about central and decentralized strategy-making processes by drawing on the management accounting literature. The proposed model suggests that a central planning process does not rule out decentralized strategy-making but rather that the full potential of strategic management is obtained when the two strategy modes are combined. It further argues that the ability to integrate the two strategy-making processes can be accomplished by appropriate communication and information systems that link decision makers across hierarchical levels and functional areas in interactive control processes. Finally it incorporates strategic management and management accounting to outline effective risk management dealing with emergent risks and opportunities to be exploited by the firm in the integrative strategy-making model enhancing upside potential while reducing the variance in returns. That is, the model shows how the interaction between central (induced) planning and decentralized (autonomous) strategy-making has dual risk and performance effects that lead to favorable the risk-return outcomes.

In short, effective strategic management processes can balance opportunistic search and operational optimization by using interacting controls to integrate central (induced) and decentralized (autonomous) actions. The ability to combine decentralized exploration with central exploitation of operational conditions is the basis for an adaptive dynamic to deal effectively with complex and frequent environmental changes.

Figure 1. The Integrative Strategic Management Model(s) with Interactive Controls



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APPENDIX
Items for strategy construct measurement

Strategic planning (induced strategy):

Please indicate the emphasis placed on each activity within your organization on average over the past 3 years:

	No importance						High importance
Establishing company mission	1	2	3	4	5	6	7
Create long term plans (3 – 5 years)	1	2	3	4	5	6	7
Yearly goals (Sales, efficiency, market share etc.)	1	2	3	4	5	6	7
Short term planning (campaigns, short term projects etc.)	1	2	3	4	5	6	7
Evaluation of company's strategic goals	1	2	3	4	5	6	7

Decentralized strategy-making (autonomous strategy):

How often can middle managers (managers below top management) without prior acceptance by top management make the following decisions:

	Never				Some times		Always
Activities aiming at increasing market share	1	2	3	4	5	6	7
Sales to new segments or markets	1	2	3	4	5	6	7
Development of important new products	1	2	3	4	5	6	7
Development of new competences	1	2	3	4	5	6	7
Development of new policies and routines	1	2	3	4	5	6	7

Interactive budget control (interactive control system):

State how much you agree to the following statements describing your organization over the past 3 years:

	Fully disagree						Fully agree
The budget information is important and is addressed by top management	1	2	3	4	5	6	7
The budget process receives regular and frequent attention from managers at all levels throughout the firm	1	2	3	4	5	6	7
The budget information is used to question and debate ongoing decisions and actions in face-to-face meetings between top management and operating managers throughout the firm	1	2	3	4	5	6	7
The budget information forces both top management and managers at all levels of the firm to continually question and revise their assumptions	1	2	3	4	5	6	7
Top management often use budgeting information as a means of questioning and debating the ongoing decisions and actions of department/managers.	1	2	3	4	5	6	7
The budget process is continuous and demands regular and frequent attention from managers at all levels.	1	2	3	4	5	6	7
There is a lot of interaction between top management and department/unit managers in the budget process.	1	2	3	4	5	6	7
Top management uses the budget process to discuss face-to-face with their subordinates changes occurring in the organization and its environment.	1	2	3	4	5	6	7